

Sauradip Nag

DEEP LEARNING RESEARCHER · SOFTWARE DEVELOPER

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Education

University of Surrey

Guildford, United Kingdom

DOCTORATE OF PHILOSOPHY (PHD) IN ELECTRICAL ENGINEERING

Jul 2020 - Jul 2023 (Expected)

- Supervisor: Prof. Tao Xiang and Prof. Yi-Zhe Song
- Thesis: Few Shot Learning and its applications in Action Localization and Detection
- Funding: iFlyTech Research Inc

Kalyani Government Engineering College

West Bengal, India

BACHELOR OF TECHNOLOGY (B.TECH) IN COMPUTER SCIENCE AND ENGINEERING

Aug. 2014 - Aug 2018

- Supervisor: Prof. Kaushik Dasgupta and Mr. Tamojit Chatterjee
- Thesis: Interacting with Softwares using Gestures
- Grade: 8.26 CGPA /10 (Among top 20 in Class)

Research and Work Experience

Indian Institute of Technology Madras

Madras, India

PROJECT ASSOCIATE IN VPLAB AND CAIR, DRDO

July 2018 - July 2020

- Supervisor : Prof. Sukehndu Das, Prof Kaushik Mitra and Prof. Balaraman Ravindran
- Project: Worked on Visual SLAM and Semantic Segmentation for IMPRINT Project of finding hidden location from scene
- Publication : Published 1 paper (top 10% paper) as first author

Indian Statistical Institute Kolkata

Kolkata, India

RESEARCH ASSOCIATE IN CVPR UNIT

July 2016 - July 2018

- Supervisor : Prof. Umapada Pal and Prof. Paliahnakhote Shivakumara
- Project: Worked on Video Scene Text Detection and Handwritten Document Analysis
- Publication : Published 3 papers (2 conference + 1 journal) all as first author

GISCLE Systems

Bangalore, India

COMPUTER VISION INTERN

Jan 2018 - April 2018

- Collaborator : Heba Tallah Maghoub
- Project: Worked on Advance Lane Detection System for Autonomous Cars in India
- Contribution : Developed Lane Detection System using Deep Learning, Object Detection Module for Drivers

Apnastudy Technologies Inc

Kolkata, India

SOFTWARE DEVELOPER INTERN

Feb 2016 - June 2017

- Collaborator : Shibaji Ray, Soumya Kundu, Dipendu Das
- Project: Worked on Artificial Intelligence based Learning Management Systems for Online Classes
- Contribution : Contributed in the website (apnastudy.com) UI and integrated Node.js Backend with the Angular.js Frontend

Research Interest

Few Shot Learning Transductive, Inductive, Zero-Shot, Generalized, Incremental/Continual and LifeLong Learning

Computer Vision Action Recognition and Localization, Semantic Segmentation, Video Summarization, Future Prediction

Multi-Modal Learning Video, Audio, Text/Caption, Image and its intermediate representation to solve low-level tasks

Other Interests Self-Supervised, Unsupervised and Weakly-Supervised Learning, Knowledge Distillation, Reinforcement Learning

Selected Publication(s)

How Far Can I Go ? A Self-Supervised approach to Depth Forecasting

Under Submission

BRITISH MACHINE VISION CONFERENCE (BMVC), VIRTUAL

June 2021

- Authors : **Sauradip Nag**, GM Jacob, Anran Qi, R Raghavendra

Proposal-Free Temporal Action Localization with Global Segmentation Mask

Under Submission

NEURAL INFORMATION PROCESSING SYSTEMS (NEURIPS), VIRTUAL

May 2021

- Authors : **Sauradip Nag**, Xiatian Zhu, Yi-Zhe Song, Tao Xiang

Few-Shot Temporal Action Localization with Query Adaptive Transformer

IEEE INTERNATIONAL CONFERENCE OF COMPUTER VISION (ICCV), MONTREAL

• Authors : **Sauradip Nag**, Xiatian Zhu, Yi-Zhe Song, Tao Xiang

Under Submission

March 2021

A New Unified Method for Detecting Text from Sports Players in Video

PATTERN RECOGNITION (PR), ELSEVIER

• Authors : **Sauradip Nag**, P Shivakumara, U Pal, T Lu, M Blumenstein

Impact Factor: 7.19

April 2020

CRNN based Jersey-Bib Number/Text Recognition in Sports and Marathon Images

INTERNATIONAL CONFERENCE ON DOCUMENT ANALYSIS AND RECOGNITION (ICDAR), SYDNEY

• Authors : **Sauradip Nag**, R Ramachandra, P Shivakumara, U Pal, T Lu, M Kankanhalli

H5-Index: 35

June 2019

What's There in the Dark

IEEE INTERNATIONAL CONFERENCE ON IMAGE PROCESSING (ICIP), TAIPEI

• Authors : **Sauradip Nag**, S Adak, S Das

H5-Index: 52

Apr 2019

Facial Micro-Expression Recognition using Time Contrasted Feature with Visual Memory

IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH AND SIGNAL PROCESSING (ICASSP), BRIGHTON

• Authors : **Sauradip Nag**, A Bhunia, A Konwer, P P Roy

H5-Index: 86

Jan 2019

A New COLD Feature based Handwriting Analysis for Ethnicity Identification

INTERNATIONAL CONFERENCE ON FRONTIERS IN HANDWRITING RECOGNITION (ICFHR) , USA

• Authors : **Sauradip Nag**, P Shivakumara , W Yirui , U Pal , T Lu

H5-Index: 19

Aug 2018

Technical Skills

Programming	C, Python, MATLAB, R, Java (J2SE, J2EE, J2ME), Javascript, HTML, CSS
Deep Learning	Tensorflow, PyTorch, Keras
Frameworks	Node.js, Angular.js, Express.js, Twilio, Bootstrap
IDE	LaTeX, VisualStudio, PyCharm, MATLABStudio, RStudio, Atom

Courses Undertaken

Undergraduate Level	Datastructures, Database, Compiler Design, Artificial Intelligence, Networks, Operating Systems, Automata
Graduate Level	Advanced Datastructures and Algorithms, Computer Vision, Advanced Deep Learning

Honors & Awards

INTERNATIONAL

2021	Oxford ML Summer School , Selected among 1000s of PhD applicants across the globe	<i>United Kingdom</i>
2020	PhD Scholarship , Awarded by IFLYTEK Research Inc and University of Surrey	<i>United Kingdom</i>
2019	Top 10% Award , Awarded for my paper "What's There in the Dark"	<i>Taiwan</i>

DOMESTIC

2018	Rank 71 , Rakuten Deep Learning Challenge	<i>India</i>
2018	GATE CSE-2018 , Ranked among top 5% candidates out of 1,07,893 Candidates	<i>India</i>
2018	Finalist , Smart India Hackathon ISRO Theme organized by Government of India and Dept. of Space	<i>India</i>
2016	Rank 2924 , Codechef October Long Challenge	<i>India</i>
2015	Rank 1803 , Codechef September Mega Cook Off	<i>India</i>

Professional Activity

2020	Reviewer , Springer Nature Computer Science Journal	<i>UK Zone</i>
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Conferences/Worshops Attended

2019	Participant , International Conference in Image Processing (ICIP)	<i>Taipei,Taiwan</i>
2019	Attendee , Advances in Robotics (AIR)	<i>IIT Madras</i>
2019	Attendee , International Workshop on Pattern Analysis and Applications (IWPA)	<i>ISI, Kolkata</i>
2019	Attendee , Workshop on Machine Intelligence and Brain Research (CCBR)	<i>IIT Madras</i>
2018	Attendee , Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP)	<i>IIIT Hyderabad</i>